

Specification

Please delete the paragraph, beginning on page 5, line 17, and ending on page 6, line 11.

Please insert that paragraph that was on page 5, line 17, and ending on page 6, line 11, at page 4, after line 7, thusly:

Fig. 1 illustrates a printed circuit assembly (PCA) having an outrigger. More specifically, Fig. 1 shows a printed circuit assembly 10 that includes an outrigger 20 affixed to the printed circuit assembly 10 by a plurality of extension bridges 25. The outrigger 20 is an extension of the printed circuit board (PCB) on leading or lagging edges that are attached by several small bridges (such as the extension bridges 25). The extension bridges 25 may be made out of the same material as the PCB and extend past the leading or lagging edge of the to-be-assembled PCB. The outrigger 20 may be made during the same manufacturing process as the printed circuit assembly 10 in one integral unit. Areas between the outrigger 20 and the printed circuit assembly 10 may be routed out to leave small connections such as the extension bridges 25. That is, routing or drilling the PCB area between the outrigger 20 and the PCA 10 creates the extension bridges 25. No routing or drilling is done where the extension bridges 25 are located. The extension bridges 25 may be drilled or routed so that the outrigger 20 can easily be separated from the PCA after SMT assembly. After assembly, the outrigger 20 may be broken off manually or cut-off by routers and discarded. Fig. 1 also shows how overhanging components 15 may hang over the outrigger 20. Outriggers may add a significant cost to the PCB. For example, each outrigger may add a total cost of between \$0.20 and \$3.50 to the cost of materials

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depending on the board size and the layer count. This makes overhanging SMT devices
expensive to implement.

Please amend the paragraph, beginning at page 9, line 17 and ending on page 10, line 9,
as follows:

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Figs. 6A-6C ~~6A-6E~~ show various keys and keyholes that may be provided on the extension apparatus 60 and the PCA 50. That is, Fig. 6A shows a key 92 that may be mated with a keyhole 94. Fig. 6B shows a key 96 that may be mated with a keyhole 97 and Fig. 6C shows a key 98 that may be mated with a keyhole 99. Other shapes of the key and the keyhole are also within the scope of the present invention. Furthermore, while the above description relates to the discussion of keys and keyholes, this terminology is merely exemplary. A key may correspond to a male part (or member) and a keyhole may correspond to a female part (or member). The male and female parts of the key and keyholes may be any of numerous types of shapes and sizes such that they are able to couple the extension apparatus 60 to the PCA 50. The connection between the boards is made within the thickness of PCA 50, as the key does not extend above the top surface or the bottom surface of the PCA 50. Thus, the thickness of the PCA 50 keeps the boards relatively level to each other during the assembly process. The extension apparatus may be mated by positioning keys over keyholes and snapping the boards together. This may be done by bringing the extension apparatus from the top of the PCA or by bringing the extension apparatus from the bottom of the PCA.
